



MADGE

Mothers are Demystifying Genetic Engineering

Submission to the Productivity Commission Inquiry into the Regulation of Agriculture

30th June 2016

Context

This submission follows a meeting on Wednesday, June 15 where Bob Phelps (Gene Ethics) and Fran Murrell (MADGE) meet Commissioner Lindwall and colleagues.

Summary

1. **The market rejects GM crops** – non-GM is a rapidly increasing market.
2. **GM crops, old and new, depend on probable carcinogens** or unapproved chemical mixtures, are risky and not needed.
3. **GM crops repeatedly fail agronomically** - super pests, super weeds, reduction in quality, crop loss and shrinking diversity.
4. **There is no scientific proof of GM food safety** - Regulatory approval borders on scandalous.
5. **Agroecology, not industrial GM farming, will feed the world** - Science, research and agronomic experience show agroecology will feed the world and cool the climate
6. **Neoliberal ideology is undermining agriculture, food, people and climate**

Conclusion:

We need agricultural regulation to rapidly establish and spread agroecology in Australia

1. The market rejects GM crops

GM crops have resulted in lawsuits and disruption of agriculture:

- Syngenta sold GM corn Vipterra to farmers in the US before approvals were obtained to sell the corn in China. Shipments of the corn were rejected. **Cargill, ADM, a stock feed company and farmers have sued Syngenta. Syngenta have countersued.** ¹
- **Two of the largest grain US grain traders, ADM and Bunge, will not buy Monsanto's new RR xtend 2 soy.** This soy is designed to be sprayed with Roundup, active ingredient glyphosate, and dicamba. The EU has not approved its use.

A Bunge spokesperson said: "The wide-scale planting of traits that are not approved by key importing countries has **the potential to seriously diminish the competitiveness of American grain and feed exports, and can result in damages throughout the entire agricultural supply chain,**" Anderson said. "ADM's policy is not to accept any commodity that contains a trait until it is approved in all of our major export markets."²

This is not as full list of the contamination, losses, recalls and lawsuit relating to GM crops. More can be provided on request. The reasons for the rejection are multiple and explained in the following paragraphs.

Labelling and market share

The Non-GMO Verified Project is the fastest growing label in the US.³ This is driving increased demand for non-GMO ingredients. The GMO labelling laws in Vermont are due to come into effect on 1st July 2016, this is also expanding the non-GMO market.

¹ Business | Fri Nov 20, 2015 6:01pm GMT

Related: [BUSINESS Syngenta sues Cargill, ADM in GMO corn fight](#)

<http://uk.reuters.com/article/uk-syngenta-seed-traders-idUKKCN0T92H420151120>

² ADM, Bunge won't buy Monsanto's new genetically modified soy. Bloomberg, 3 May 2016 by Linda Mulvany and Shruti Singh <http://www.bloomberg.com/news/articles/2016-05-02/adm-bunge-refuse-to-trade-monsanto-genetically-modified-soybean>

³ Food Dive The non-GMO industry is growing fast. Where does it go from here? By [Carolyn Heneghan](#) | August 24, 2015

<http://www.fooddiver.com/news/the-non-gmo-industry-is-growing-fast-where-does-it-go-from-here/404409/>

Non-GM sales are increasing and grain traders are responding

Cargill has non-GMO product lines⁴: “Growing consumer interest in food and beverage products made from ingredients sourced from non-genetically modified crops (non-GM) is creating an array of opportunities and challenges for packaged goods manufacturers and food service operators.

In a new study of 4,000 U.S. consumers conducted by Cargill, 50% of those surveyed said that non-GMO was important to them when purchasing packaged foods or beverages.”

Bunge has created a non-GMO corn product line too:

“For Bunge North America, the corn meal initiative will not be the only channel in which the company seeks to satisfy the market for non-bioengineered ingredients. In October 2015, Bunge acquired Whole Harvest Foods, L.L.C., Warsaw, N.C., a maker of expeller-pressed oils, including non-G.M.O. canola oil.

With the introduction of non-G.M.O. corn meal, Bunge also will make available non-G.M.O. hominy feed, a byproduct of the corn milling process. **A major dairy product manufacturer recently announced plans to go non-G.M.O. in terms of what it will use for animal feed, so we know there is emerging interest,”** Mr. Ellis said. **“That’s an important piece of this puzzle.”** ⁵

2. GM crops, old and new, depend on probable carcinogens or unapproved chemical mixtures

Roundup (glyphosate) to lose approval in EU and US?

Most GM crops are sprayed with weedkiller. The aim is for the weeds to die and the GM crop to survive. This trait accounts for about 80% of GM crops. The main weedkiller used is Roundup, active ingredient glyphosate.

- In March 2015 the WHO’s International Agency for Research on Cancer (IARC) released a monograph saying that **glyphosate (Roundup) is a probable carcinogen**⁶.

⁴ **Non-GMO products** [Cargill’s non-GM offerings](http://www.cargillfoods.com/na/en/news-events/events-tradeshows/ift2014/non-gmo/index.jsp) <http://www.cargillfoods.com/na/en/news-events/events-tradeshows/ift2014/non-gmo/index.jsp>

⁵ **Food Business News** Bunge launches non-G.M.O. corn product line **May 16, 2016 - by Josh Sosland** http://www.foodbusinessnews.net/articles/news_home/Supplier-Innovations/2016/05/Bunge_launches_nonGMO_corn_pro.aspx?ID=%7B28DA4A79-61B0-4533-9710-0E1350B4D3A9%7D

⁶IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISKS TO HUMANS

- Enlist Duo is a herbicide mixture of glyphosate and 2,4-D. It is designed to be sprayed on the new generation of GM crops. **The EPA has asked for its approval of this herbicide to be repealed, as there are harmful synergistic effects.**⁷

The IARC report on glyphosate has been subject to attack by the industry and regulators. This is understandable as there is a great deal of money at stake and if banned, would mean most GM crops would have to stop being grown.

The European Food Safety Authority (EFSA) has released a contrary opinion to IARC. A published commentary⁸ by numerous scientists shows how EFSA's opinion is flawed. The EFSA report:

- **Incorrectly dismissed evidence for human harm**
- Dismissed evidence of harm to animals, partly relying on the comparison of experiments with animals outside of the experiment known as 'historical control data'. This is poor scientific practice.
- Used secret studies that were not available for scrutiny by anyone else. This cannot be seen as scientific.
- Downplayed evidence of oxidative stress and excluded evidence of chromosomal damage to exposed humans and human cells.
- Gave peer-reviewed studies in the published literature less weight than Good Laboratory Practice studies. These GLP studies, despite their name, do "not guarantee validity and relevance of the study design, statistical rigour and attention to sources of bias".
- The document is not transparent: **"For example, citations for almost all references, even those from the open scientific literature, have been redacted.** The ability to objectively evaluate the findings of a scientific report requires a complete list of cited supporting evidence. As another example, **there are no authors or contributors listed for either document, a requirement for publication in virtually all scientific journals where financial support, conflicts of interest and affiliations of authors are fully disclosed.** This is in direct contrast to the IARC WG evaluation listing all authors, all publications and public disclosure of pertinent conflicts of interest prior to the WG meeting."

Volume 112 (2015) **Some Organophosphate Insecticides and Herbicides: Diazinon, Glyphosate, Malathion, Parathion, and Tetrachlorvinphos**

<http://monographs.iarc.fr/ENG/Monographs/vol112/mono112-09.pdf>

⁷ Wall Street Journal EPA Seeks to Revoke Approval of Dow Chemical's Enlist Duo Herbicide By JESSE NEWMAN Updated Nov. 25, 2015 6:33 p.m. ET

<http://www.wsj.com/articles/epa-revokes-approval-of-dow-chemicals-enlist-duo-herbicide-1448469843>

⁸ Differences in the carcinogenic evaluation of glyphosate between the International Agency for Research on Cancer (IARC) and the European Food Safety Authority (EFSA

<http://jech.bmj.com/content/early/2016/03/03/jech-2015-207005.full>

The EFSA report was based on findings by the German Federal Institute for Risk Assessment (BfR). **BfR used the Glyphosate Task Force's (GTF) report as a basis for theirs. The GTF has been set up by the chemical industry and members include Monsanto, the inventor of Roundup and Syngenta.**⁹

The FAO/WHO Joint Meeting on Pesticide Residues (JMPR), a UN body, has also released an assessment on glyphosate¹⁰. **At least two of the JMPR panel members have serious conflicts of interest with industry**¹¹. The report does not say glyphosate is not carcinogenic (hazard) but that it is “unlikely to pose a carcinogenic risk to humans from exposure through the diet” (risk)”. EU regulations are based on hazard (carcinogenicity), not risk (how you are exposed).

The EU Commission has decided to extend the license for Glyphosate for 18 months due to legal obligations, pending the decision of the European Chemicals Agency on Glyphosate's health risks. The evidence of these risks has been increasingly exposed in peer-reviewed studies.

The US's Environmental Protection Agency (EPA) is undertaking a review of Glyphosate. It is several years behind schedule. What will happen to US GM crops should the EPA refuse to reapprove it?

3 - GM crops repeatedly fail agronomically

GM crops are mainly either herbicide tolerant (57%) or insect resistant (15%) or both (28%). The repeated use of herbicide and plant produced, insect-killing toxins has created **superweeds and superpests**. The industry's response is to use increasing levels and mixtures of toxins. So far this year alone there are reports of:

1. Failure of the GM bt cotton crop in India due to pest attack. Mahyco Monsanto Biotech India Limited (MMBL) controls 90% of the **market “Bt cotton seeds are now unaffordable to farmers due to high royalties charged by MMBL which has a near monopoly on Bt cotton seeds and that this has led to a market failure.”**¹²
2. Failure of the GM bt cotton crop in Pakistan. **“Well-informed farmers attribute this disaster to the widespread use of genetically modified**

⁹ <http://www.glyphosatetaskforce.org/>

¹⁰ <http://www.who.int/foodsafety/jmprsummary2016.pdf?ua=1>

¹¹ <http://www.gmwatch.org/news/latest-news/16950-what-does-the-jmpr-s-verdict-on-glyphosate-really-mean>

¹² **Centre tells Delhi high court Bt cotton's resistance to pests has waned**

<http://www.livemint.com/Politics/oZHYGceXXVZB3lit9PytEN/Centre-tells-Delhi-high-court-Bt-cottons-resistance-to-pest.html>

seeds that were formally introduced in the country in 2010 but were being smuggled since 2005. Now BT cotton (a genetically modified variety) is grown in 88pc of the cotton-cultivated area.¹³

3. Reduction in quality of the cotton in Burkino Faso after the introduction of GM genes into local varieties. “GM Bt cotton was [commercialised](#) in Burkina Faso in 2009. But during the first years of commercial release, Burkinabè officials noticed declines in staple lengths and ginning ratios. Monsanto employees blamed water stress and other weather problems. However, the quality problems persisted and by the 2013/14 season over two-thirds of the nation’s crop was classified as lower-quality medium staple length, with only a third retaining its previous classification as medium to high staple length. **The ginning ratio remains well below the 42% achieved by non-GMO cultivars.**”¹⁴

Many reports and studies have been written about other failures including:

1. **“Failure to Yield”**¹⁵ which shows most yield increases are due to conventional breeding or improved agricultural practices, not GM crops.
2. **“Impacts of genetically engineered crops on pesticide use in the U.S. - the first sixteen years”**¹⁶. This shows how GM crops have increased pesticide use by 183 million kilos.
3. **“Sustainability and innovation in staple crop production in the US midwest.”**¹⁷ Showed that the EU had comparable, if not better, production than the US, despite growing minimal amounts of GM crops.
4. **“Farmers’ choice of seeds in four EU countries under different levels of GM crop adoption.”**¹⁸ Non-GM seed adopting countries had more varieties available to them.
5. **“Monsanto vs Farmers”**¹⁹ on how GM seed patents have opened farmers to being sued and undermined the basis of the food industry, seed.
6. **GM Myths and Truths** – Section 6.1 details the lists of GM failures in Africa.²⁰ They include a GM sweet potato that yielded poorly and lost virus resistance. GM cotton, soy and corn projects that ended in failure and ruined farmers.

¹³ ***Cotton crisis*** ZUBEIDA MUSTAFA — PUBLISHED JUN 24, 2016 01:53AM

<http://www.dawn.com/news/1266798/cotton-crisis>

¹⁴ <http://www.gmwatch.org/news/latest-news/16677-burkina-faso-abandons-gm-bt-cotton>

¹⁵ **Failure to Yield - Union of Concerned Scientists**

http://www.ucsusa.org/food_and_agriculture/our-failing-food-system/genetic-engineering/failure-to-yield.html#.V3NcgCN97R0

¹⁶ Impacts of genetically engineered crops on pesticide use in the U.S. -- the first sixteen years

<https://enveurope.springeropen.com/articles/10.1186/2190-4715-24-24>

¹⁷ <http://www.tandfonline.com/doi/full/10.1080/14735903.2013.806408>

¹⁸ <http://link.springer.com/article/10.1186/2190-4715-25-12>

¹⁹ Centre for Food Safety Monsanto vs Farmers

<http://www.centerforfoodsafety.org/files/cfsmonsantovsfarmerreport11305.pdf>

²⁰ <http://earthopensource.org/gmomythsandtruths/sample-page/6-feeding-world/246-2/>

It is hard to imagine why, with such a repeated record of failure, increased pesticide use, reduction in quality, hardship to farmers and loss of markets that any claim for the benefits of GM crops can be taken seriously. This is why the research relied on by the biotech industry and supporters comes from the following sources:

1. International Service for the Acquisition of Agri-biotech Applications (ISAAA). It is funded by all the major biotech organisations including Monsanto and Crop Life International.²¹
2. P G Economics. Brookes and Barfoot are co-directors. The biotech industry has commissioned numerous favourable reports from them.²²
3. Genetic Literacy Project. A group of unknown funding that regularly attacks those concerned about GM and pesticides.²³
4. Academics Review, GMO Pundit and BioFortified all have links to the biotech companies. These were exposed via recent FOI requests. The report “Seedy Business What Big Food is hiding with its GMO PR campaign” details the deceptions.²⁴

The failure of GM crops and food has made it necessary for agrochemical companies to resort to misleading people about GM. Friends of the Earth released a report “Spinning Food” on this fraudulent behavior. **“The report shows how these companies are trying to preserve their markets and advance policy agendas by deploying front groups; targeting moms, attacking journalists and scientists; grooming third-party allies that pose as independent sources; producing advertising disguised as editorial content and using other covert social media tactics to influence public opinion and sway policymakers -- without most people realizing the story is being shaped behind the scenes to promote corporate interests.”**²⁵

Prominent food writers like Marion Nestle and Michael Pollan have reported being approached to promote GM.²⁶ It is hard to take any support of GM seriously once you have seen the enormous PR effort going in to control the message.

²¹ <http://www.isaaa.org/inbrief/donors/default.asp>

²² <http://gmwatch.org/latest-listing/1-news-items/792-pg-economics-a-gm-watch-profile>

²³ <http://usrtk.org/news-releases/consumer-group-usrtk-calls-on-jon-entine-to-reveal-funding-ties-to-industries-he-defends/>

²⁴ Seedy Business: What Big Food is Hiding with its GMO PR Campaign

<http://usrtk.org/gmo/seedy-business/>

²⁵ <http://www.foe.org/projects/food-and-technology/good-food-healthy-planet/spinning-food>

²⁶ Monsanto and Conde Nast offered big bucks writers PR projects. <http://m.motherjones.com/tom-philpott/2014/08/monsanto-and-conde-nast-offered-big-bucks-writers-pr-project>

4 - There is no scientific proof of GM food safety - Regulatory approval borders on scandalous.

GM crops were first developed and commercialized in the US. However the **US Food and Drug Administration has never done a pre-market review or approval on any GM food.**

Instead it has a voluntary consultation process where companies wishing to release a GM food provide information to the FDA. The consultation ends with the FDA sending a letter to the company. The following is an extract from a standard letter:

“Based on the safety and nutritional assessment Pioneer has conducted, it is our understanding that Pioneer has concluded that food and feed derived from event 4114 corn are not materially different in composition, safety, and other relevant parameters from corn-derived food and feed currently on the market, and that **event 4114 corn does not raise issues that would require premarket review or approval by FDA.**”

Internal documents from the FDA were released following a lawsuit. It was clear that there was no agreement on the safety of GM crops. The scientists realized they were entirely new and therefore unpredictable. One memo stated **“The process of genetic engineering and traditional breeding are different, and according to the technical experts in the agency, they lead to different risks.”** The judge in the lawsuit said she was restricted to examining only the information the FDA had before May 1992 (eight years previously). She ruled on those grounds that the FDA administrators had reasonable grounds to presume there was an overwhelming consensus of safety. This is despite a 1991 memo from a biotechnology co-ordinator saying **“As I know you are aware, there are a number of specific issues addressed in the document for which a scientific consensus does not exist currently, especially in the need for specific toxicology tests...I think the potential for some substances to cause allergenic reactions is particularly difficult to predict.”**²⁷ There is still no scientific consensus on GM crop safety.

GM foods have been let onto the market with a lack of even basic testing. This is detailed in numerous publications. Here are a selection:

Altered Genes Twisted Truths - Steven Druker
Earth Open Source - GM Myths and Truths
Marie Monique Robin – The World According to Monsanto

These are fully referenced.

In Australia FSANZ accepts company data and does no independent testing. MADGE's report **“Fed Up With FSANZ”**²⁸ details their failings.

²⁷ HEIA Fran Murrell What is genetically modified food, why is it controversial and how do I know if I'm eating it?" <http://www.madge.org.au/Docs/Fran-Murrell.pdf>

²⁸ MADGE Fed Up With FSANZ <http://www.madge.org.au/fed-fsanx>

MADGE has written extensively on the flaws of GM studies. Here is an extract from our article “The weight of a chicken breast does not show it’s safe to eat.” The fully referenced version can be accessed on our website²⁹.

“No regulators ask for long-term, reproductive, developmental or multi-generational animal feeding studies on GM crops.

However, the companies can submit animal feeding trials. Most of the studies last for 90 days or less. This is much shorter than the two-year life span of a rat or a mouse. Sometimes only five to seven animals per group are tested but it can be as few as two. These tiny groups will only show harm if it is extreme.

The whole GM plant may not be tested. Instead animals are force-fed one dose of the substance the GM developer thinks they have engineered into the plant. The animals are then observed for only one or two weeks. **These tests cannot show GM food is safe for us to eat over the long term. Perhaps the tests are designed to check that we won’t drop dead after one GM meal?**

The companies who want their GM crop approved pay for the tests and provide them to Food Standards Australia New Zealand (FSANZ). FSANZ do no independent testing or ongoing surveillance and expect the GM companies to “monitor for existing and emerging risks of their products.”

FSANZ have never rejected a GM crop application.

Tests looks at chicken breast weight or lamb chop tenderness

Animal feeding studies examining the weight of chicken breasts and the tenderness of lamb chops have been used in applications for the GM food we eat. These are animal production studies, done to reassure farmers that animals fed GM feed will produce sufficient meat. These studies do not show that GM foods are safe for us to eat.

When studies do show harm

When independent, published, peer-reviewed studies show harm FSANZ dismisses them.

FSANZ requests no further investigation if company-supplied studies show harm to animals

“Lists of studies” claiming to show safety are nonsense

Two popularly touted ‘lists of studies’ are the Nicolai review (1700+ studies) and the GENERA list (400+). **These lists are a random mix of studies mostly irrelevant to human safety. Some are done on animals like trout, quail, chickens, cows and sheep that have different guts to humans and/or lay eggs.** Studies showing harm, or the potential for harm, are listed and yet their significance is downplayed or ignored.

²⁹ <http://madge.org.au/weight-chicken-breast-does-not-show-its-safe-eat>

Most GM crops, about 80%, are designed to be sprayed with weedkiller, mainly Roundup (glyphosate). **There has been mounting evidence of the harm from Roundup for years in scientific studies, in harm done to soil and animals.³⁰ It has been repeatedly found in human urine.** The health consequences of this intense exposure to Roundup are unknown and may be extensive.

South American communities living near GM soy fields are experiencing vastly increased levels of illness, birth defects and cancer. The issue is so serious that doctors have convened several conferences on the problem³¹. Latin American groups have said of the GM companies: “The impacts of their activities have been: genetic contamination of agricultural biodiversity, destruction of natural ecosystems, **subjecting the population to health problems due to the extensive use of pesticides, close to genocide.**³²

5 - Agroecology, not industrial GM farming, will feed the world - Science, research and agronomic experience show agroecology will feed the world and cool the climate

The largest investigation into how the world will feed itself concluded in 2008. It was the UN’s IAASTD report. Four hundred scientists and social scientists took four years to investigate and produce it. It found GM would be marginal and possibly harmful. Instead it wanted a whole new agricultural paradigm. This is reflected in its title “Agriculture at a Crossroads”³³. Why has this been ignored?

The UN “the Special Rapporteur presented his new report “Agro-ecology and the right to food” before the UN Human Rights Council. Based on an extensive review of recent scientific literature, the report demonstrates that **agroecology, if sufficiently supported, can double food production in entire regions within 10 years while mitigating climate change and alleviating rural poverty.**

The report therefore calls States for a fundamental shift towards agro-ecology as a way for countries to feed themselves while addressing climate- and poverty challenges.³⁴ Why has this been ignored?

The UNCTAD report “Wake Up Before It’s too Late”³⁵ contends: “Developing and developed countries alike need a paradigm shift in agricultural development:

³⁰ GMO Evidence, Roundup <http://www.gmo-evidence.com/location/roundup-evidence/>

³¹ Third national conference of physicians of crop sprayed towns. Argentina 2015

<http://www.reduas.com.ar/3rd-national-conference-of-physicians-of-crop-sprayed-towns/>

³² GE Free Latin America “At almost two decades from the introduction of GM crops to Latin America”

<http://www.madge.org.au/Docs/GE-Free-Latin-Amer.pdf>

³³ UN IAASTD report <http://www.unep.org/dewa/Assessments/Ecosystems/IAASTD/tabid/105853/Defa>

³⁴ UN report Agroecology and the Right to Food.

<http://www.srfood.org/en/report-agroecology-and-the-right-to-food>

from a "green revolution" to a "truly ecological intensification" approach. This **implies a rapid and significant shift from conventional, monoculture-based and high external-input-dependent industrial production towards mosaics of sustainable, regenerative production systems that also considerably improve the productivity of small-scale farmers.** We need to see a move from a linear to a holistic approach in agricultural management, which recognizes that a farmer is not only a producer of agricultural goods, but also a manager of an agro-ecological system that provides quite a number of public goods and services (e.g. water, soil, landscape, energy, biodiversity, and recreation)."

Why has agroecology been virtually ignored despite its scientific and agronomic superiority to GM? A paper by Vanloqueren and Baret (2009)³⁶ suggests that **GM fits the current mindset, structure and ideology. GM is reductionist, concentrating on the gene and cell level. It can be patented. It is profitable for the public-private partnerships that most universities and research establishments are now dependent on. GM suite "the new rules of global finance and free trade, or consolidations and strategic alliances in the agricultural input industry."**

6 - Neoliberal ideology is undermining agriculture, food, people and climate

Neoliberal ideology promotes globalization, deregulation and privatization. It has been the dominant ideology since the 1980s.

In that time climate change has been allowed to reach catastrophic proportions. **If climate scientist James Hansen is right, then we are about to cross climate boundaries that create positive feedback loops so enormous that temperature increases will mean all life on earth as we know it will become extinct.**³⁷ **However it appears that this is worth it if you are a fossil fuel company.**

Monoculture, the basis of modern global, industrial farming is dependent on fossil fuels. It also depends on land-grabbing³⁸ and the profligate use of inputs

³⁵ UNCTAD report 2013 "Wake up before its too late: Make Agriculture Truly Sustainable now for food security in a changing climate" <http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=666>

³⁶ How agricultural research systems shape a technological regime that develops genetic engineering but locks out agroecological innovations

<http://www.sciencedirect.com/science/article/pii/S0048733309000614>

³⁷ <https://www.theguardian.com/environment/earth-insight/2013/jul/10/james-hansen-fossil-fuels-runaway-global-warming>

³⁸ WorldWatch Institute Land 'grabbing' grows as agricultural resources dwindle"
<http://www.worldwatch.org/land-%E2%80%9Cgrabbing%E2%80%9D-grows-agricultural-resources-dwindle>

including water. The over extraction of this means the collapse of various food bowls, including California, in the future.³⁹

Industrial monoculture expansion is driving out the farming that feeds people in Africa and elsewhere. This month the EU accepted a highly critical report⁴⁰ on the New Alliance for the Food Security and Nutrition. The New Alliance is a partnership of governments and business with the aim of lifting fifty million people out of poverty in Africa. However the report shows, in fact, the beneficiaries are not ordinary Africans but the corporations. African farmers would become indebted, lose the diverse seed they have, would not have suitable control over the changes and have not been consulted on the scheme.

The introduction of the monoculture GM soy into Latin America has been disastrous. It provides export profits for large corporations but has seen the food sovereignty and security of local populations eroded. In their open letter to the UN, GE-Free Latin America explain:

“The companies that produce seeds and pesticides and trade GM food together with local elites and in complicity with the government in office have turned Latin America into a maquila of GM crops, and now they pretend to impose the massive trade liberalization of transgenic corn in its center of origin and diversification. The impacts of their activities have been: genetic contamination of agricultural biodiversity, destruction of natural ecosystems, subjecting the population to health problems due to the extensive use of pesticides, close to genocide. Thus, in the Southern Cone, glyphosate resistant soybeans cover an area of 475,700 Km2. This whole area is sprayed with a cocktail of pesticides including glyphosate, affecting millions of people living not only in the main spraying area but also in its buffer zone. The impacts that the agrobiotech model have produced are so enormous, that they can’t be solved by techniques such as risk assessment and risk management because they have violated the human rights of entire populations. Therefore, this discussion should not be deal only in international forums such as the Cartagena Protocol, because it just analyzes the impacts of genetic modification on biodiversity. Instead **this issue should be evaluated by the Human Rights agencies of the United Nations as a problem of systematic and legalized violation of rights.”**⁴¹

The discussion on 15th June with the Productivity Commission appeared to reveal that the Commission was skeptical of the benefits of agroecology, of the

³⁹ National Geographic If You Think the Water Crisis Can't Get Worse, Wait Until the Aquifers Are Drained <http://news.nationalgeographic.com/news/2014/08/140819-groundwater-california-drought-aquifers-hidden-crisis/>

⁴⁰ EU Development Committee Report on the New Alliance for Food Security and Nutrition 2016. <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8-2016-0169+0+DOC+PDF+V0//EN>

⁴¹ GE Free Latin America “At almost two decades from the introduction of GM crops to Latin America” <http://www.madge.org.au/Docs/GE-Free-Latin-Amer.pdf>

flaws in GM testing and dismissed evidence of GM agrological failure and market rejection.

It appears to uncritically accept agribusiness assurances that all is well in the food and farming system, even with the current dairy crisis causing extreme hardship to many farmers locally and globally.

The questions it asks about ‘technologies’ are predicated on the implicit assumption that GM is useful, safe and beneficial. The only basis for these claims, as noted in section 3 above, is the industry itself and the reports it pays third parties to produce.

Productivity Commissions questions:

- *How do GM crop moratoria affect investment in Australian agriculture and the ability of domestic farmers to compete internationally?*
- *Is the approval process for GM crops effective and efficient? If not, how can it be approved?*

In our lively discussion the Commission noted a Soviet-style food supply system, where food is allocated by government regulation rather than by the market, led to the famine of 1932-33. Food was used as a means of controlling food and led to the death of around six million people. In part it was based on the false science of Lysenkoism.

This is an apt illustration of the dangers of totalitarianism. Political scientist Sheldon Wolin contends that we live in an “inverted totalitarianism”⁴². Journalist Chris Hedges explains **“Inverted totalitarianism, unlike classical totalitarianism, does not revolve around a demagogue or charismatic leader. It finds expression in the anonymity of the Corporate State. It purports to cherish democracy, patriotism, and the Constitution while manipulating internal levers.”**

Do we live in an inverted totalitarianism or a democracy? Perhaps a comparison of the description of each by Sheldon Wolin may help:

Democracy:

“democracy is about the conditions that make it possible for ordinary people to better their lives by becoming political beings and by making power responsive to their hopes and needs. What is at stake in democratic politics is whether ordinary men and women can recognize that their concerns are best protected and cultivated under a regime whose actions are governed by principles of commonality, equality, and fairness, a regime in which taking part in politics becomes a way of staking out and sharing in a common life and its forms of self-fulfillment. Democracy is not about bowling together but about managing

⁴² **Sheldon S Wolin** Democracy Incorporated: Managed Democracy and the Specter of Inverted Totalitarianism

together those powers that immediately and significantly affect the lives and circumstances of others and one's self."

Inverted totalitarianism:

"“Antidemocracy, executive predominance, and elite rule are basic elements of inverted totalitarianism. Antidemocracy does not take the form of overt attacks upon the idea of government by the people. Instead, politically it means encouraging what I have earlier dubbed “civic demobilization,” conditioning an electorate to being aroused for a brief spell, controlling its attention span, and then encouraging distraction or apathy. The intense pace of work and the extended working day, combined with job insecurity, is a formula for political demobilization, for privatizing the citizenry. It works indirectly. **Citizens are encouraged to distrust their government and politicians; to concentrate upon their own interests; to begrudge their taxes; and to exchange active involvement for symbolic gratifications of patriotism, collective self-righteousness, and military prowess. Above all, depoliticization is promoted through society's being enveloped in an atmosphere of collective fear and of individual powerlessness: fear of terrorists, loss of jobs, the uncertainties of pension plans, soaring health costs, and rising educational expenses.**”

MADGE contends that the latter description is more accurate of modern Australia and much of the wealthy world. Interestingly a recent Radio National programme gave an inside view on how corporate lobbyists in Australia work. First they identify problems a Minister is having, and then they contact the relevant public servants.

(Speaker) “and then go in saying “I can help you fix your problem.”
(Journalist) “So lobbyists are essentially assisting public servants to make policy?”

(Speaker) “Even more so these days after government departments have downsized so there has been a lot of expertise that has been sent out the door in government departments. **So governments departments more and more depend on particularly on lobby groups, industry associations and the like for the expertise that they no longer have.**”⁴³

MADGE Australia is a volunteer group with no ability to undertake these kinds of actions. It is hard to see which groups, apart from business, would be able to do so. **It is hard to see how this is compatible with democratic or fair outcomes.** Perhaps it explains why we are becoming an ever-more unequal and unjust society. It would be useful to ponder why government is unable to fund adequate public servants? Could it be because of the relentless neoliberal attacks on ‘big government’ and the subsequent mass sackings?

⁴³ Radio National RN Talks Money and Politics (18 minutes in)
<https://radio.abc.net.au/programitem/pgOL6MnQoV?play=true>

Neoliberalism has been dominant for decades. One of the most enthusiastic proponents of it has been the US. One of the results is that the **US has nearly 50% of its children in poverty or near poverty.**⁴⁴

We could discuss the productivity potential in this, after all the Victorian author Charles Dickens grew up in poverty and described it in his profitable novels like *Oliver Twist* and *Bleak House*. Perhaps we could set up a factory for the poor to ‘pick oakum’?

Or perhaps we could ponder that “(i)n March this year the American Academy of Pediatrics (AAP) launched a new recommendation that all doctors in the United States screen children for poverty..... Associate Professor at Drexel University and Director of Community Pediatrics, Dr Daniel R Taylor says, **“The most common – and serious – disease in American children is poverty.”** “Poverty is known to cause various forms of **irreversible damage to children**, including low birth weight, infant mortality, impaired language development, chronic illness, nutritional deficits and injury.”

“An AAP policy document on the subject notes, “A growing body of research shows that child poverty is associated with neuroendocrine dysregulation that may alter brain function and may contribute to the development of chronic cardiovascular, immune, and psychiatric disorders.”

The document adds that, “child poverty also influences genomic function and brain development by exposure to toxic stress, a condition characterized by excessive or prolonged activation of the physiologic stress response systems.”

Irreversible damage to children does not sound very productive and we need to note this is this happening in Australia too. According to the Right To Food Coalition **“over 2.5 million Australians are living in poverty, almost a quarter of whom are children.” “children going to school hungry lose more than 2 hours a day learning time...serious impacts (due to food insecurity) of stress, anxiety and hunger on family relationships, social isolation and motivation. Food insecurity can also increase the risk of conditions such as cardiovascular disease, obesity and diabetes ...As a result, food insecurity substantially influences public expenditure in health care.”**⁴⁵

⁴⁴ Election 2016: Trickle Down Economics, Why It Screws The Poor, And Why You’re Next Under A Turnbull Government
https://newmatilda.com/2016/06/28/election-2016-should-australias-children-be-removed-from-the-coalitions-care/?utm_campaign=shareaholic&utm_medium=facebook&utm_source=socialnetwork

⁴⁵ The Right to Food Coalition Position Statement on the Human Right To Food.
<https://righttofoodcoalition.files.wordpress.com/2016/04/human-right-to-food-position-statement-170416.pdf>

The imposition of the Free Market, so beloved of neoliberal ideology, has been starving people for generations. In Ireland food exports to England continued during the famine in support of the Free Trade ideology.

"Cecil Woodham-Smith, considered the preeminent authority on the Irish Famine, wrote in The Great Hunger; Ireland 1845-1849 that, "...no issue has provoked so much anger or so embittered relations between the two countries (England and Ireland) as the indisputable fact that **huge quantities of food were exported from Ireland to England throughout the period when the people of Ireland were dying of starvation.**"

"Although the potato crop failed, the country was still producing and exporting more than enough grain crops to feed the population. But that was a 'money crop' and not a 'food crop' and could not be interfered with."

According to John Mitchel, quoted by Woodham-Smith, **"Ireland was actually producing sufficient food, wool and flax, to feed and clothe not nine but eighteen millions of people," yet a ship sailing into an Irish port during the famine years with a cargo of grain was "sure to meet six ships sailing out with a similar cargo."**

One of the most remarkable facts about the famine period is that there was an average monthly export of food from Ireland worth 100,000 Pound Sterling. **Almost throughout the five-year famine, Ireland remained a net exporter of food."**⁴⁶

Mike Davis wrote "Late Victorian Holocausts: El Nino famines and the making of the Third World" in which he argues **"Millions died, not outside the 'modern world system', but in the very process of being forcibly incorporated into its economic and political structures. They died in the golden age of Liberal Capitalism; indeed, many were murdered ... by the theological application of the sacred principles of Smith, Bentham and Mill."**

Therefore the role of markets in famines should be examined. Especially as **Australia is being promoted as a food exporter, without first adequately ensuring that the existing population is well-fed.**

India, post Independence, was very mindful of the famines it had endured under Colonial Rule. Mike Davis shows that while under British rule there were famines every four years, under previous regimes famines were once a century. Therefore India established the Food Security Act where food is bought from farmers and distributed to poor families. This has been contentious, however it has been pointed out that the US has it's own form of market distorting subsidies:

"The opposition of developed countries are unjustifiable in the light of existing asymmetries between developed and developing countries. For instance, in

⁴⁶ Food exports from Ireland during the famine years.
<http://www.usbornefamilytree.com/irishfoodexports.htm>

2010, the poor in India received on average of only 58 kg per person, 3.1 times less than the 182 kg per person of the 80 million beneficiaries of cereals food aid in the USA. This is also 4.2 times less than the 241 kg for each of the 46.6 million beneficiaries of the Supplemental Nutrition Assistance Program (SNAP) or food stamp programme in the USA," said Jacques Berthelot of the French NGO Solidarite.⁴⁷

Conclusion

Perhaps the approach needed for both markets and regulation is to ask what the aim of the system is?

MADGE suggests that regulation in agriculture should be reorientated towards:

- 1) **Ensuring everyone, especially children, is well nourished**
- 2) **Creating a diverse and resilient agricultural economy** that allows fairness for farmers, workers and shoppers.
- 3) Returning carbon to the soil to **alleviate global climate disruption**. This also has the beneficial effect of storing more water and increasing fertility.

Using agricultural regulation to rapidly establish and spread agroecology in Australia can do this. There is no time to waste.

⁴⁷

TWN Info Service on WTO and Trade Issues (Nov13/10)
25 November 2013
Third World Network

CSOs call for permanent solution on food security
Published in SUNS #7702 dated 22 November 2013

<http://www.twn.my/title2/wto.info/2013/twninfo131110.htm>